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forms are connected for the following reasons: First, the two hosts are intimately associated in growth. Second, the appearance of the *Caeoma* antedates that of the *Melampsora*. Third, the *Melampsora* occurs on those willow branches low enough to brush against the *Ribes* bushes, or else to be easily infected by the wind. Fourth, during the latter part of the season of 1905, whenever an infected *Salix* was found, search was made for the *Ribes* bush and then for defunct aecidia, almost invariably with successful results. Fifth, the *Salix* goes to the mouth of the Canyon, but the *Ribes* accompany them less than half-way. When the *Ribes* stops, the *Melampsora* also stops.

NOTES FROM MYCOLOGICAL LITERATURE, XX.

W. A. KELLERMAN.

R. A. HARPER'S WORK ON SEXUAL REPRODUCTION and the Organization of the Nucleus in Certain Mildews is Publication No. 37 of the Carnegie Institution of Washington, pp. 1-104. Pl. I-VII, September 1905. Of this interesting and important investigation no brief summary can be made, but the author's conception as to alternation of generations in the higher fungi may be quoted in part. "In the rusts we have sexual reproduction by vegetative fertilization. The fusing cells are perhaps morphologically vegetative offshoots of an egg-cell. . . . In the Basidiomycetes by apogamy sexual cell fusion may have disappeared or we may have vegetative fertilization. . . . In the Ascomycetes we have sexual reproduction and alternation of generations, modified by the adaptation of the spore mother cell as an explosive organ for the dissemination of the spores and as a storage reservoir for the production of resting spores with a large supply of metaplasmic reserve products." . . .

C. L. SHEAR GIVES AN ACCOUNT OF SOME OUT-DOOR INOCULATIONS made in the Spring of 1902, under the title of *Peridermium cerebrum* Peck and *Cronartium quercuum* (Berk.), pp. 89-92, *Journal of Mycology*, Volume 12, May 1906. On May 1st aecidiospores of *Peridermium cerebrum* (from *Pinus virginiana*) were successfully applied to *Quercus coccinea*—uredo sori appearing May 12. Shirai has by inoculation proven the connection between *Cronartium gigantium* (Mayr) Tubeuf and what he calls *Cronartium quercuum* (Cooke) Miyabe. Mr. Shear is of the opinion that *Peridermium gigantium* (Mayr) Tubeuf is the same as *P. cerebrum* Peck described many years earlier.

THE NORTH AMERICAN SPECIES OF HELIOMYCES—6 in number—are grouped and diagnosed in the *Journal of Mycology* for

May 1906. These are small Agarics which are tremelloid when fresh and growing, and when dry have the appearance of Marasmii. Prof. Morgan affixes these to his Monograph of Marasmius (published in previous Nos. of the same Journal) to which genus in fact most of the species were originally referred. Both the Marasmius and the Heliomyces species are indexed together—and also issued as one pamphlet (*Separate*).

IN SCIENCE FOR MAY 25, 1906, CHARLES J. CHAMBERLIN points out that *Mega* as a prefix in such words as megaspore, megasporophyll, megasporocarp, megaphyllous, should be used rather than *macro* (macrospore, etc.), since *mega*, from the Greek *megas*, means big, great, large, — equivalent to the Latin *magnus*, and is the opposite of *micro*. But *macro* means long, is not the opposite of *micro*, but of the Greek *brachus* which means short. If the idea is that of great size rather than of great length the prefix *mega* not *macro* should be used.

PARAPHYSES IN THE GENUS GLOMERELLA, by John L. Sheldon, is reported in Science, N. S. 23:851-2, 1 June 1906. Allusion to the fact is made, that there is no evidence that those who studied *Gloeosporium* (Atkinson, Stoneman, Clinton, Spaulding and von Schrenk) saw anything suggesting paraphyses — in fact, Clinton says 'there was no sign of paraphyses,' and Spaulding and von Schrenk in describing the genus *Glomerella* say that it is 'aparaphysate.' The author found in cultures of *G. rufomaculans* isolated from a Baldwin apple, perithecia containing long slender paraphyses.

FUNGI AS RELATED TO WEATHER and Fungi upon the Experiment Grounds — the former extracts from the weekly "Weather and Crop Bulletins;" the latter notes on the occurrence of a few parasitic fungi — are given on pp. 510-512 and 517 in the Report of the Botanist, [B. D. Halsted] N. J. Agr. Coll. Exp. Station Report for the year 1905, issued 1906.

A CAUSE OF FREAK PEAS is given with one half-tone illustration of abnormal plants in Torreya for April, 1906. The cause is *Ascochyta pisi* Lib., a fungus that attacks not only the growing pea-stems and leaves, but also the pods and thence may grow into the seed.

A KEY TO THE AGARICEAE OF TEMPERATE NORTH AMERICA is given by William A. Murrill in the Dec. No. (1905) of Torreya. The Agariceae here enumerated are not ordinary gill-fungi, but a subfamily of the Polyporaceae with furrowed hymenium. They are corky or woody, not fleshy. The genera included are Agaricus, Cerrena, Lenzites, Gloeophyllum and Cylocporus. The key is carried to the species in each case — gotten up on the dichotomal plan.

A DISCUSSION OF FUENFSTUECK'S AND ZAHLBRUCKNER'S TREATMENT OF LICHENS in the Pflanzenfamilien is given by Albert Schneider in the May Torreyia (1905) under the title: The Classification of Lichens. They are not recognized as an autonomous group by all. There is great confusion with regard to the delimitation of lichen species. The number of good species (continues the author) is in all probability less than one-fifth of those actually described. The system of classification proposed by Zahlbruckner is excellent and should be generally adopted.

A LIST OF TWENTY ADDITIONAL SPECIES is given by G. A. Reichling in Torreyia, May 1905, as Contributions to the recorded Fungi and Slime-Mould Flora of Long Island.

GEORGE MASSEE GIVES AN INTERESTING ACCOUNT OF A FUNGUS parasitic on a Moss, in Torreyia, March 1906. It occurs on *Weisia viridula*, the capsule of the moss under normal conditions being usually erect and symmetrical, when attacked by the parasite however it becomes distinctly curved and unsymmetrical. The description is under the following name: *Epicoccum torquens* Massee n. sp.

FUNGI COLUMBIANI, CENTURY XXI, by Elam Bartholomew, is dated March 20, 1905. The following new species are included: *Cladosporium nervale* Ell. & Dearn. on living leaves of *Rhus typhina*; *Diaporthe ostryigena* Ell. & Dearn. on trunks and branches of *Ostrya virginica*; *Haplosporella conmixta* Barthol. on fallen limbs of *Ulmus pubescens*; *Polystigma adenostomatis* Farlow n. sp., on living leaves of *Adenostoma fasciculatum*; *Dichromera prunicola* Ell. & Dearn. on *Prunus virginiana*, and *Sphaeropsis magnoliae* Ell. & Dearn. on *Magnolia (acuminata?)*. In this country the genus most largely represented is *Puccinia* with 26 pockets; there are 5 *Uromyces*, and 7 *Septorias*.

Some Factors in the color production in a species of *Fusarium* is discussed by Dr. J. B. Pollock, in Science N. S. 23:422-3, Mar. 16, 1906. The *Fusarium* taken from an ear of corn was under culture found to develop its bright salmon-pink only in bright sun light; moisture also is of significance—the moister the medium the less the color showed. Color varied on media of different constitutions—pale on cornstarch; on carrot, Hubbard squash and cornmeal the color was between roseous and testaceous (Sacc. Chrom.); on apple, onion and potato, almost exactly ochraceous; on wheat flour slightly paler than orange; on buckwheat flour it was darkest red, slightly redder than testaceous, on raw dahlia tubers bright red, but almost no color produced if the medium is steamed—and the fungus produced a green color.

In respect to the Parasitism of *Neocosmospora*, Howard S. Reed shows, in Science N. S. 23:751-2, May 11, 1906, that

it is a weak parasite (as previously claimed by Atkinson) and only attacks plants which are first debilitated by the presence of another fungus. The var. *nivea* (apparently) of *N. vasinfecta* was found as a wilt disease in the ginseng gardens of Missouri. The entrance seems to depend upon an anthracnose caused by *Vermicularia dematium*.

The Society of American Bacteriologists held the seventh annual meeting at the University of Michigan, Dec. 28-29, 1905. The report of the secretary, F. P. Gorham in *Science N. S.* 23:205-221, Feb. 9, 1906, presents a long list of papers and abstracts of same—the following seeming to be of systematic trend: Lactic Acid Bacteria, W. M. Esten; The Microscopic Estimate of Bacteria in Milk, Francis H. Slack; Kinds of Bacteria Concerned in Souring Milk, P. G. Heinemann; Bacteria of the Root Nodules of the Leguminosae, Karl F. Kellerman and T. D. Beckwith.

Two Mycological articles were read before the Botanical Society of America at the New Orleans Meeting, according to the report of the Secretary, William Trelease, *Science N. S.* Vol. XXIII, Feb. 9, 1906, pp. 221-2. They were as follows: J. C. Arthur, Cultures of Uredineae in 1905; and G. F. Atkinson, The Development of *Ithyphallus impudicus* (L.) Fries, from France.

Dr. N. M. Glatfelter gives a Preliminary list of Higher Fungi collected in the vicinity of St. Louis, Mo., from 1898 to 1905 in the Transactions of the Academy of Science at St. Louis, Vol. XVI, No. 4. The locality, date of occurrence and miscellaneous observations, besides the spore measurements in all cases, are given. About 500 species are listed. *Amanita* has 12 representatives, *Amanitopsis* 6, *Lepiota* 25, *Tricholoma* 8, *Clitocybe* 16, *Pleurotus* 8, *Collybia* 14, *Mycena* 10, and many others are equally well represented.

The Secretary's Report (by Francis E. Lloyd) of Sec. G. [Botany] American Association for the Advancement of Science, New Orleans, gives the following mycological papers (see *Science N. S.* 23:201-4, Feb. 4, 1906): Development of *Armillaria mellea*, and of *Agaricus campestris*, Geo. F. Atkinson; North American Species of *Peridermium*, J. C. Arthur and F. D. Kern. The following were presented at a joint meeting of the Section and the American Mycological Society: Some reasons for desiring a better classification of the Uredinales, J. C. Arthur; Uredineae of the Gulf States, S. M. Tracy; North American Gill Fungi, F. S. Earle; Lichens and recent conception of Species, Bruce Fink; Cultures of *Colletotrichum* and *Gloeosporium*, P. H. Rolfs; The Affinities of the Fungus of *Lolium temulentum*, E. M. Freeman; *Peridermium cerebrum* Peck and *Cronartium quercuum* (Berk.), C. L. Shear; Ramu-

laria: An Illustration of the Present Practice in Mycological Nomenclature, C. L. Shear; Notes on *Pachyma cocos*, P. H. Rolfs; *Penicillium glaucum* on Pineapple Fruits, P. H. Rolfs; Occurrence of *Fusoma parasiticum* Tubeuf in this Country, Perley Spaulding; Some Peculiar Fungi New to America, W. G. Farlow.

M. Prof. N. Patouillard describes many new species and one new genus in the Bulletin de la Société Mycologique de France, Tome XXII, 1er Fascicule, 28 Feb. 1906, pp. 45-62, under the title Champignons recueillis par M. Seurat dans la Polynésie française. The new genus is *Mapea* (*Uredinaearum*) — la désignation ist tirée du mot *Mape*, par lequel les indigènes Mangaréviens désignent *Inocarpus edulis*. The diagnosis is as follows: "Sori erumpentes, applanati, orbiculares, lati, ceracei, ambitu sinuoso-lobati, undique, fertiles. Sporae (uredosporae) fuscidulae, ovoideae, verruculosae, stipitae" M. ratiata n. sp. Hab. in fructibus Inocarpi edulis, Roruru, Ribitea.

Melanobasidium is the name of a new genus (*Tuberculariees* *Dematiees*) proposed by M. A. Maublanc in an article Sur quelques espèces nouvelles ou peu connues de Champignon inférieurs, Bulletin de la Société Mycologique de France, Tome XXII, 1er Fascicule, 28 Feb. 1906. The description of the genus is as follows: "Foliicolum, maculicolum, sporodochia minima, erumpentia, atra, ex hyphis ramosis, septatis, intricatis composita, sporophoris cylindracis, densis, septatis, concoloribus vestita; conidia solitaria, acrogena, ovoidea, hyalina" M. mali n. sp. In foliis vivis Piri mali ad Sevillem, Hispaniae. About a dozen new species besides are described.

What to note in the Macroscopic study of Lichens under the subheads: Introductory statement, The Thallus, General forms of Thalli, Sizes of Thalli, The surfaces of Thalli, Colors of Thalli, is told in the Bryologist, July, 1905; by Bruce Fink.

The Bulletin de la Société Mycologique de France, Tome XXII, 1er Fascicule contains the following: Ch. Van Bambeke. — De la valeur de l'épispore pour la détermination et le groupement des especes du genre *Lycoperdon*; Corfec. — Excursion mycologique aux environs de Laval (Mayenne); Dr. Baret. — Note sur les Champignons vendus sur les marchés de Nantes en 1905; Em. Perrot. — Le Congrès international de Botanique a Vienne (1905); Peltreau — La Mycologie a l'Exposition de Vienne; Em. Boulanger — Note sur la Truffe; N. Patouillard. — Champignons recueillis par M. Seurat dans la Polynésie française. (Pl. I et II); A. Maublanc. — Sur quelques espèces nouvelles ou peu connues de Champignons inférieurs. A. Maublanc. — Quelques Champignons de l'Est africain. (Fig. texte);

F. Gueguen. — La moisissure des caves et des celliers; étude critique, morphologique et biologique sur le *Rhacodium cellare* Pers. (avec 3 planches,); L. Lutz. — Associations symbiotiques du *Saccharomyces Radaisii* Lutz; Bibliographie analytique.

M. le docteur Baret reports in the Bulletin de la Société Mycologique de France the following list of edible species sold in the market of Nantes during the year 1905: *Amanita cæsarea*, *Lepiota procera*, *L. rachodes*, *L. excoriata*, *L. pudica*, *Psalliota campestris*, *P. ammophila*, *P. arvensis*, *P. pratensis*, *P. sylvatica*, *P. bernardii*, *Clitopilus orcella*, *Marasmius oreades*, *Lentinus tigrinus*, *Tricholoma personatum*, *Clitocybe laccata*, *Boletus edulis*, *B. aestivalis*, *B. aereus*, *B. scaber*, *B. scaber* var. *auranticus*, *B. luteus*, *Fistulina hepatica*, *Hydnum repandum*, *Craterellus cornucopioides*, and *Lycoperdon giganteum*.

Bruce Fink's article in the March No. (1905) of the Bryologist on How to Collect and Study Lichens, deals fully with the subject under the following heads: Introductory, Collecting, Collecting Outfit, Where to Collect, Aids at Home, The Study at Home, and the Herbarium.

Further Notes on *Cladonias*, V, by Bruce Fink, the Bryologist, May 1905, deals with *Cladonia gracilis* (L.) Willd., widely distributed over North America, not occurring in the southern half of the United States. The varieties which are also fully described are *dilatata* (Hoffm.) Wainio *dilacerata* Flk., *chordalis* (Flk.) Shaer., *aspera* Flk., and *elongata* (Jacq.) Flk.

Lichenology for Beginners is the title of a very instructive article by Frederick Leroy Sargent in the May (1905) No. of the Bryologist. What these plants are is discussed, then their habits, distribution, etc., receive attention with suggestions for collecting and taking care of specimens. The second installment is found in the July No.; it is illustrated, fully explaining the characters of a *Parmelia*.

The Transactions of the British Mycological Society for the season 1904, published 13th May 1905, includes the following contents: Report of the Whitby Foray and complete list of Fungi and Mycetozoa gathered; Eriksson's recent researches on the vegetative life of the Cereal Rust Fungi, by Charles P. Plowright; Saccardo's *De diagnostica et nomenclatura mycologica*, admonita quaedam; Recent Researches on Parasitism, by R. H. Biffen; *Corticium* (*Peniophora*) *chrysanthemi*, by Charles B. Plowright, M. D.; Notes on three uncommon Fungi, by Cecil H. Sp. Percival; Fungi new to Britain, by Miss A. Lorrain Smith F. L. S. and Carleton Rea, B. C. L., M. A. & C.

An Index of the Mycological Writings of C. G. Lloyd, Vol. I, 1898-1905, [May 1905], Cincinnati, Ohio, U. S. A., is a pamphlet of 20 pages. Mr. Lloyd states: I have been working on the Gastromycetes for four or five years and have published the results as they appealed to me. This is an Index of the publications as far as the work has gone. As it is designated as Vol. I, "The intention is evident that others are expected to follow."

G. K. Merrill in Lichen Notes No. 2, see Bryologist for January 1906, refers (1) to the recent finding of *Umbilicaria pustulata papulosa* on a lower limb of a young spruce — very remarkable since the genus *Umbilicaria* is typically saxicoline; and (2) to the finding by Mrs. Agnes Ashworth, Central Point, Oregon, innixed with *Evernia vulpina*; Mr. Merrill designates it *Cetraria islandica* (L.) Ach. M. [modification] *arborialis* (conditional nomination).

New Species of Edible Philippine Fungi by Edwin Bingham Copeland, No. 28, July, 1905, Department of the Interior, Bureau of Government Laboratories, is a paper with English descriptions of several new species of Agarics and a Lycoperdon, these being translations of the Latin descriptions of the species as published in *Annales Mycologici*, Vol. 3, No. 1. Two species are illustrated by half-tones. The Basidiomycete flora of that country is said to be a very rich one in species if not in individuals.

In *Malpighia* Anno. XVIII. Fasc. X-XII, 1904, we find the following mycological articles: Dott. Teodoro Ferraris, *Enumerazione dei funghi della Valsesia* (seri terza) — an extended annotated list including the descriptions of twenty-two new species, and one page of illustrations; L. Cufino, *un secundo Contributo alla Flora Micologica della Provincia di Napoli* — a list of 57 species; L. Cufino, *Fungi Magnagutiani* — 42 species collected in the vicinity of Mantua and Faenza by Count Magnaguti.

New species of *Exoascaceae* — diagnoses in English of *Taphrina truncicola* Kusano, on *Prunus incisa*; *Taphrina piri* Kusano, on *Pirus miyabei* Sargent; and *Taphrina japonica*, on *Alnus japonica* S. et Z.; by S. Kusano, in the *Botanical Magazine*, Vol. XIX, Jan. 20th, 1905.

Ernest S. Salmon reports on the present aspect of the Epidemic of the American Gooseberry-Mildew in Europe in the *Journal of the Royal Horticultural Society*, Vol. XXIX, parts 1, 2 and 3, 1905. This [*Sphaerotheca mors-uvae* (Schw.) B. & C.] was recorded from Ireland in 1900; now it is reported from nine localities in six countries: From Russia it is reported from ten widely separated districts. The writer calls attention to the

widespread economic loss such a disease as the present one can cause. He refers to the history of the Vine-Mildew — appearing in Europe for the first time on hot-house vines at Margate in 1845, it spread the next year to hot-houses of that neighborhood. In 1847 it was reported from one locality in France; in 1848 from several localities in France and Belgium. It spread rapidly to other countries. By 1854 the vineyards in France were invaded to such an extent that the yield was reduced to one-tenth or one-twentieth. Similar to the early stages of this history are the circumstances attending the first outbreak of the American Gooseberry-Mildew, sec. Mr. Salmon.

Bulletin No. 85, Bureau of Plant Industry, U. S. Department of Agriculture, by B. M. Duggar, treats of the Principles of Mushroom Growing and Mushroom Spawn Making. The preface states that as an outcome of the work Dr. Duggar has already accomplished, spawn of pure-culture origin is now being produced on a very large scale by several growers and is giving excellent results. This method enables the grower to insure and maintain the most desirable varieties of mushroom.

Lichen Notes, No. 1, by G. K. Merrill, in the November No. of the Bryologist (1905), deals with *Cladonia verticillata* Hoffm., or *Cladonia gracilis* (L.) Nyl. var. *verticillata* Fr. The various North American forms receive extended comment.

Frederick LeRoy Sargent's IV and last installment of Lichenology for Beginners suggests an ecological study of these plants, and then outlines a mode of procedure preparatory to identifying species with the aid of books on the North American species — a brief bibliography being given. The article closes with a sample Key for about three dozen species.

On the Nomenclature of Fungi having many fruit-forms, by J. C. Arthur, in the Plant World, Volume 8, No. 3, March, and No. 4, April, 1905, places in clear light the question of choosing a name from a number of synonyms. The three stages of Wheat Rust, each when first discovered receiving a scientific name at the hands of botanists, is taken as an example for illustration. A point of great significance is contained in the following quotation: "It was Linneaus' great contribution to nomenclature that he restricted names to two terms, one generic and the other specific. By this change he did not eliminate the descriptive idea embodied in the name, *but he did superpose the appellative idea.*" He then proceeds to show that a name applies to the whole species, to all its variation in aspect, to every member of the species, and to each individual in all its stages of development, and in all its structural parts. Issue is taken with Magnus and Saccardo, and the contention is fortified that there is no objection to placing the Uredineae, and all other fungi, under

the same laws for nomenclature as are found serviceable for other plants, that is to say, the earliest name applied to a species is to be retained, even if given to an imperfect form or early stage in the cycle of development.

Professor George F. Atkinson gives in the *Plant World* for September and October, 1905, *Outlines for the observation of some of the more common Fungi*, such as Black Mould, Downy Mildews, White Rust, True Rusts, the Smuts, Puffballs, Earth-stars, Agarics, Ink-caps, Amanitas, Lepiotas, Polypori, Boleti, Clavarias, Helvellas, Powdery Mildews, and the Black Fungi.

Melville T. Cook gives a very full (popular) account of plant diseases caused by parasitic fungi (and insects) in Cuba for the past year in his *Informe del Departamento de Patologia Vegetal*, the article constituting pp. 147-207 inclusive of the *Primer Informe Anual de la Estación Central Agronomica de Cuba, 1904-5*. Some of the species especially mentioned are *Colletotrichum gleosporioides* Penzig, *Cladosporium elegans* Penzig, *Ophionectria coccicola* E. & E., *Ustilago zeae* (Beckm.) Ung., *Puccinia sorghi* Schw., *Cercospora gossypina* Cke. (está reconocido como el primer estado de *Mycosphaerella gossypina* [Cke.] Earle), *Melanconium sacchari*, *Leptosphaeria sacchari*, *Cercospora personata* (B. & C.) Ellis, *Uromyces arachnidis* P. Henn., *Uredo fici* Cast., *Septoria lycopersici* Speg., *Cladosporium fulvum* Cke., *Phyllosticta hortorum*.

F. S. Earle, under the title *Algunos Hongos Cubanos*, in *Primer Informe Anual de la Estación Central Agronomica de Cuba, I:225-246, I Junio 1906*, gives diagnosis in Spanish of the following new Cuban species: *Pocillaria* [Lentinus] *reflexa*, *P. vestida*, *P. cinnamomea*, *P. palmeri*, *P. simulans*, *Phyllotus* [Pleurotus] *imbricatus*, *Ph. hygrophanus*, *Geopetalum* [Pleurotus] *eugeniae*, *Ge. album*, *Ge. brunescens*, *Crepidotus* [Pleurotus] *lentinoides*, *Galera simulans*, *Ga. grisea*, *Ga. cubensis*, *Gymnochilus* [Hypholoma] *flocculosus*, *Gy. campestris*, *Gy. musae*, *Gy. roystoniae*, *Gy. caespitosus* *Stropharia cubensis*, *Str. floccosa*, *Pholiotina* [Pholiota] *musae*, and *Pholiota cubensis*. These are preceded by half a dozen pages of general discussion of the group and particularly of the work on the Cuban Fungi to date. The first publication was by Montague in 1842, who noted 113 species. Charles Wright from 1856 to 1867 collected some fungi which were examined by Dr. M. A. Custer, who sent part of them to Rev. J. M. Berkley. This was the basis of the *Fungi cubensis*, 1859, in the *Journal of the Linnaean Society*. Late collectors named are L. M. Underwood, W. A. Murrill and F. S. Earle.

The Articles in *Annales Mycologici*, Vol. IV, No. 3, Juni 1906, are: Legarde, J., *Contribution a l'Étude des Discomycetes*

charnus; Rehm, H., Zum Studium der Pyrenomyceten Deutschlands, Deutsch-Oesterreichs und der Schweiz; Saccardo, P. A., Notae Mycologicae; Neger, F. W., Kleinere mycologische Beobachtungen; Hoehnel, Franz V. and Litschauer, Victor, Revision der Corticieen in Dr. J. Schroter's "Pilze-Schlesiens" nach seiner Herbar exemplaren; Schorstein, Joseph, Spörenkeimung in Sömete-lösing: Neue Literatur.

The Bulletin de la Société Mycologique de France, Tome XXII — 2er Fascicule, presents this sommaire: L. Dolland. — Observations sur le Mycenastrum Corium Desv. et sur le Bovista plumbea Pers. (Pl. VI); N. Patouillard et P. Hariot. — Fungorum novorum Decas secunda; A. de Jackzewski. — Notes phytopathologiques: Alternaria Grossulariae n. sp. et Colletotrichum Grossulariae n. sp.; Paul Vuillemin. — Un nouveau genre de Mucedinées: Hemispora stellata (Pl. VII); G. Bainier — Mycothèque de l'École de Pharmacie, III (Pl. VIII); Mycothèque de l'École de Pharmacie, IV (Pl. IX); Em. Boulanger. — Germination de la spore echinulee de la Truffe; F. Gueguen. — La moisissure des caves et des celliers; étude critique, morphologique et biologique sur le Rhacodium cellare Pers. (Fin); X. Gillot. — Nouveaux tableaux scolaires de Champignons. — Notes toxicologiques; M. Barbier. — Empoisonnement par l'Entoloma lividum. Ant. Magnin. — Les expositions mycologiques de Besancon. P. A. Saccardo. — Note sur les Herbiers mycologiques. Index bibliographique des travaux mycologiques parus en France et a l'étranger pendant l'année 1904.

A. P. MORGAN'S NORTH AMERICAN SPECIES OF MARASMIUS, published in the Journal of Mycology for September and November 1905 (vol. 11) and January 1906 (vol. 12) "is an attempt at an orderly arrangement of the species thus far enumerated in North America, including the West India Islands. It is only an endeavor to get together the scattered species so that some critical study of them may be made; hence the descriptions of the different authors are given as written and there is no indication of the synonyms which undoubtedly occur to some extent." He says these are small or minute Agarics, growing for the most part upon wood or among the dead leaves in woods; they are easily dried in good shape and make elegant specimens for the herbarium. The species are numerous, especially abounding in the forests of tropical regions. More than 500 species are listed in Saccardo's Sylloge, and Prof. Morgan includes 162 species as North American in this preliminary monograph. They are grouped under sections; these again are ranged in divisions, under which usually one or more sets of synoptical descriptive head-lines are given, thus practically furnishing a useful key for convenience in identifying the species. The parts have been issued as a *Separate*, bound together as one pamphlet.

A BULLETIN (No. 163, CALIFORNIA AGRICULTURAL EXPERIMENT STATION, Dec. 1904) by Ralph E. Smith is devoted to Pear Scab (*Fusicladium pirinum* Lib.), being an illustrated popular account, with economic notes.

A RUST-RESISTING CANTALOUPE FORMS BULLETIN 104, Colorado Agricultural Experiment Station, November 1905. The "rust" referred to is *Macrosporium cucumerinum* E. & E.

B. O. LONGYEAR PUBLISHED AN APPLE ROT due to an undescribed species of *Alternaria* as Bulletin 105, November 1905, Colorado Agr. Exp. Station. Besides the general account, the microscopical characters are given in detail and in figures.

D. R. SUMSTINE GIVES A BRIEF NOTE ON *WYNNEA AMERICANA* with new description of specimen collected at Ohio Pyle, Pa. See *Journal of Mycology*, March 1906.

SECOND SUPPLEMENT TO NEW GENERA OF FUNGI published since the year 1900, with citation and original description is given by P. L. Ricker in *Journal of Mycology*, March and May, covering 14 pages. This, like the first installment of the compilation, gives the genera in alphabetical order under the eight large groups of fungi.

PLANT DISEASES IN 1905, BY W. A. ORTON, Yearbook U. S. Dept. Agr. 1905; 602-611, 1906, is a résumé of plant disease compiled from reports of field observations by agents of the Department and officers of Experiment Stations. It indicates briefly the prevalence of the diseases in 1905 as compared with conditions in previous years. The diseases indicated by common names and the scientific name of the causative organism are grouped as heretofore under Pome Fruits; Stone Fruits; Small Fruits; Tropical Fruits; Vegetable and Field Crops; Cereals; Forage Crops; Fiber Plants; Nut, Forest, and Shade Trees; Greenhouse and Ornamental Plants.

THE VERTICILLIEAE, AND GONATOBOTRYTIDEAE are finished and the Hyalodidymae begun by Prof. Dr. Lindau in Rabenhorst's *Kryptogamen-Flora*, Erster Band, VIII Abteilung, Pilze, 97. Lieferung, 20 June 1905.

IN RABENHORST'S *KRYPTOGAMEN-FLORA*, I. Bd., VIII Abt., Pilze, 98. Lieferung, 15 Juli 1905, the Hyalodidymae are completed, and the Hyalophragmiae are carried to the Genus *Ramularia*.

TWO ARTICLES OCCUPY THE APRIL No. (Vol. IV) of the *Annales Mycologici*, namely: Fr. Bubák, Neue oder Kritische Pilze [second instalment, mostly new species, nos. 15-57] and J. Lagarde, Contribution à l'étude des Discomycètes charnus.

M. PAUL VUELLIMIN GIVES THE NOUVEAU GENRE DE MUCEDINEES: *Hemispora stellata* in the Bulletin trimestrial de la So-

ciété Mycologique de France, tome XXII, 2er Fascicule, 15 May 1906. The new species *H. stellata* was found on the inferior face of a crust of *Aspergillus repens*. The diagnosis of the genus is as follows: *Hemispora* n. g. — Mycelium of Mucidinée-Macronémée abundant, hyalin, fin, cloisonné, ramifié, Tubes fertiles, ramifiés à la base. Chaque rameau conidiophore se termine par une vésicule (protoconidie) précédée d'un étranglement annulaire à paroi épaissie, brune, rigide. La vésicule se transforme, en tout ou en partie, en une série de segments sporiformes (deuteroconidies). Parfois elle s'allonge en un nouveau conidiophore ou émet des ramifications susceptibles de se comporter de même.

A PART OF THE BOTRYTIDAE is included in the 95th Lieferung of Rabenhorst's *Kryptogamen-Flora*, VIII Abt., Pilze, G. Lindau, issued 3 April 1905. The genera are numerous — *Ovularia* perhaps being the largest, having 50 or more species.

IN NOTAE MYCOLOGICAE, AUCTORE P. A. SACCARDO, *Annales Mycologici*, 4:273-8, Juni 1906, three new genera and many new species are described. The new genus *Endothiella* represents the pycnidium of *Endothia*; *Endothiella gyrosa* n. sp. is the type. *Muchmoria* represents a new genus *Dematiacearum*, the new species (*M. portoricensis*) occurs in rimis corticis arboris emortuae indet. pr. Signal Tower Hill, Ponce, Porto Rico (Rev. L. J. Muchmore). *Fairmania* belongs to the *Sphaeroidaceae*—"praeicipue forma peculiari sporulae, soleae calcaneum exacte ornantis, ab *Epithyrio* subgenere *Coniothyrii* dignoscitur.

IN LIEFERUNGEN 96 (RABENHORST'S KRYPTOGAMEN-FLORA, PILZE, G. LINDAU, issued 10 May 1905), the Botrytidae are finished. There are enumerated between four and five dozen species of Botrytis. These are arranged under the sub-genera *Eubotrytis*, *Polyactis*, *Phymatotrichum* and *Cristatella*.

HEDWIGIA, BAND XLV, HEFT 3, 28 MARCH 1906, contains two articles to be listed here, namely: Theodor Brandt, Beiträge zur Anatomischen Kenntnis der Flechtengattung *Ramalina*; and P. Magnus, *Uropyxis rickiana* P. Magn. und die von ihr hervor-gebrachte Krebsgeschwulst.

P. MAGNUS GIVES AN EXTENDED ACCOUNT OF *UROPYXIS RICKIANA* n. sp. and die von ihr hervorgebrachte Krebsgeschwulst, *Hedwigia* 45:173-177, Pl. IX, 28 Mar. 1906. The species was found in Brazil by Prof. J. Rick on some *Bignoniaceae*. "Die Gattung *Uropyxis* ist bisher in verhältnismässig wenigen Arten bekannt. . . . Mit Ausnahme der afrikanischen *Uropyxis Steudneri* P. Magn. und der asiatischen *U. Fraxini* (Kom.) P. Magn. stammen sie alle aus Amerika und treten dort zwei Gruppen von *Uropxis*-Arten auf Leguminosen und auf Berberis auf. Zu ihnen tritt nun als dritte amerikanische Gruppe *Uropyxis rickiana* P. Magn. auf einer *Bignoniaceae*, und sicher

werden sich noch mehr *Uropyxis*-Arten in Amerika nachweisen lassen. Das südlichere Amerika scheint ein Zentrum der Gattung *Uropyxis* zu sein."

A CONTRIBUTION TO A REVISION OF THE NORTH AMERICAN HYDNACEAE forms Vol. 12 of the Memoirs of the Torrey Botanical Club, issued 13 June 1906, author Howard James Banker. The area covered includes the continent of North America and its adjacent Islands north of the Isthmus of Panama. Of the 500 known species not more than 200 have been found in our region. Dr. Banker's synopsis of genera shows the following names: *Hydnum*, *Hericium*, *Steccherinum*, *Echinodontium*, *Sarcodon*, *Hydnellum*, *Phellodon*, *Leaia*, *Auriscalpium*, *Grandiniodes*. The monograph contains full descriptions, ample notes and keys. The new species here proposed are as follows: *Hericium fimbriatum*, *Steccherinum morgani*, *St. adustulum*, *Sarcodon reticulatus*, *Sarcodon underwoodii*, *Hydnellum nuttallii*, *Hydnellum complicatum*, *Hydnellum earlianum*, *Phellodon ellisi-anus* and *Leaia piperata*. Two new genera are *Leaia* (*Hydnum stratosum* Berkeley, 1845), and *Grandinioides* (*Hydnum flavum* [Swartz 1835] Berkeley 1843). This important monograph also includes a Bibliography of 11 pages.

A LENGTHY LIST OF PARASITIC FUNGI collected near Triberg in August 1905 is given by Otto Jaap in the Botanische Zeitschrift, No. 7-8, August 1906, under the title Ein Kleiner Beitrag zur Pilzflora des Schwartzwaldes. He regards as of especial interest the following: *Dothidella geranii*, auf *Geranium silvaticum*, *Melampsorella blechni*, *Puccinia chrysosplenii*, auf *chrysosplenium oppositifolium*, *Phoma sagittalis* n. sp. auf *Cytisus sagittalis*, *Actinomena podograriae*, *Ramularia prenanthis* n. sp., *Cercospora magnusiana* auf *Geranium silvaticum*, und *Passalora bacilligera* var. *alnobetulae* n. var. auf *Alnus alnobetula*.

A LIST OF ABOUT 3 DOZEN SPECIES and description of *Polyporus fagicola* n. sp. is given by William A. Murrill in the February No. of *Torrey* (1906). The collections were made in August and September 1905. The new species was found on the top of a fallen decorticated beech log in heavy mixed woods on the slope of Boarstone Mountains, Piscataquis Co., Maine. It has the habit of *Polyporus polyporus*.

A STUDY OF THE DEVELOPMENT OF ASCUS AND SPORE FORMS in Ascomycetes by J. Horace Faull is published in the Proceedings of the Boston Society of Natural History, vol. 32, No. 4, June 1905. No full report can here be given, but the eleventh item in this summary is as follows: The evidence points to the conclusion that while the ascus has probably not been derived from the sporangium of the Mucorineae, the phenomena of spore formation are not incompatible with the view that homologizes

the ascus with the zoosporangium, nor with the view that the Ascomycetes have originated from some such Phycomycetous group as the Peronosporineae or Saprolegniineae, an affinity first suggested by de Bary on the basis of sexuality.

THE VIII ABTHEILUNG, ERSTER BAND, RABENHORST'S KRYPTOGAMEN-FLORA contains the first installment of Hyphomycetes by G. Lindau, issued May 16, 1904. The general system used by Saccardo is here followed and the first pages of descriptions (beginning with *Sarcinomyces*, pertain to the Chromosporieae, a section of the Hyalosporae of the family Mucedinaceae. The descriptions of the species are rather brief, some notes are added especially in case of important pathogenic species and occasional figures in the text are given. Greater convenience would accrue had the generic name, especially when the species are very numerous, been repeated in full instead of being indicated by the initial letter, or better yet the full name repeated at the top of successive pages.

MANY GENERA, SOME WITH A LARGE NUMBER OF SPECIES, *e. g.* of *Oidium* (which are listed and described though noted in some cases as conidial forms of certain Ascomycetous species) are given by G. Lindau in 93. Lieferung, Ester Band, VIII Abtheilung of Rabenhorst's Kryptogamen-Flora (pp. 65-128), issued 30 June 1904. *Cephalosporium charticolum* is described as a new species, and *Eidamia* is established as a new genus of the Aspergilleae.

P. A. SACCARDO GIVES MICROMYCETES AMERICANI NOVI—*Mycetes boreali-americani* a Doct. Fairman lecti (11 new species) and *Mycetes Mexicana* a Doct. S. Bonansea lecti (5 new species)—in the Journal of Mycology, March 1906. The diagnoses, notes, etc., are in Latin.

PROF. DR. F. BUBAK DESCRIBES 11 NEW SPECIES of North American fungi and one new genus under the title of Einige Neue Pilze aus Nord America, Journal of Mycology, March 1906. The new genus is as follows: *Pseudostegia* Bubák n. g. Melanconiacearum. The type species is *P. nubilosa*, Lexington, Ky., on leaves of *Carex* sp.—“Ein sehr interessanter Pilz, welcher mit meiner neuen Gattung *Anaphysomene* (Annales Mycologici 1906) verwandt ist. . . . “Es ist möglich, dass er als Konidienstadium zu *Stegia caricis* Peck (welche aber mit *Stegia subvelata* Rehm identisch ist) gehört. Es scheint mir dann weiter, dass *Cryptosporium nubilosum* Ell. et Ev. mit meinem Pilze identisch ist, denn ich vermute, dass die Breite der sporen nur durch einen Druckfehler statt 2.5μ - 8.5μ angegeben ist. Sollte meine Vermutung zutreffen, dann musste der vorliegende Pilz *Pseudostegia nubilosa* (Ell. et Ev.) Bubák genannt werden.”

ERNST A. BESSEY NOTES, IN THE JOURNAL OF MYCOLOGY for March 1906, the occurrence in this country of *Dilophospora*

alopecuri (Fr.) Fr. It was found on leaves of *Calamagrostis canadensis* among galls caused by nematodes.

PLEUROTUS HOLLANDIANUS SP. NOV. BY D. R. SUMSTINE is diagnosed in Latin, in the March (1906) No. of the Journal of Mycology. It is *P. petaloidei* affinis sed forma tomento pilei, latitudine lamellarum differt; collected on rotten trunks, Latrobe, Pa.

RUST NOTES FOR 1905, BY J. M. BATES, Journal of Mycology, March 1906. Records of cultures are given — April 6, *Puccinia subnitens* on *Monolepis nuttalliana* (some ripe aecidia noticed on May 12 but more on accompanying *Roripa sinuata* and *Bursa bursa-pastoris*); cultures also made on *Sophia incisa* — *Lepidium apetalum* also a good host. Culture of *Puccinia amphigena* on *Smilax hispida* — the latter covered with aecidia June 10. An *Oenothera biennis* with ripe aecidia covering the under side (hence not *Aec. Peckii*) associated with *Carex pennsylvanica* with uredo; elsewhere same was secured also III "which looks like a pale weak uredo" — pointing toward genetic connection and a new species.

THE ARTICLES IN THE JOURNAL OF MYCOLOGY FOR MAY 1906 are the following: Shear, *Peridermium cerebrum* Peck and *Cronartium Quercuum* (Berk); Morgan, North American Species of *Heliumyces*; Ricker, Second Supplement to New Genera (Concluded); Kellerman, Index to North American Mycology; Kellerman, Notes from Mycological Literature, XIX.

THE TABLE OF CONTENTS OF THE JOURNAL OF MYCOLOGY, March 1906, is as follows: Kellerman, Obituary, J. B. Ellis; Bates, Rust Notes for 1905; Saccardo, *Micromyces Americani Novi*; Bubák, *Neue Pilze aus Nord Amerika*; Bessey, *Dilophospora Alopecuri*; Sumstine, *Pleurotus Hollandianus* Sp. Nov.; Sumstine, Note on *Wynnea Americana*; Ricker, Second Supplement to New Genera; Kellerman, Index to North American Mycology; Kellerman, Notes from Mycological Literature XVIII; Shear, American Mycology Society.

THE TYLOSTOMEAE BY C. G. LLOYD, Cincinnati, Ohio, U. S. A., February 1906, pp. 1-28, Plates 74-85. Descriptions and abundance of figures (half tones). As treated they embrace all *Gastromyces* with dry spores, having peridia borne on distinct stalks that are not prolonged as axes. As thus defined [the author continues] it is a very natural tribe of Puffballs," differing from the *Podaxineae* which also have the peridia borne on stalks which, however, are continuous as axes of the gleba to the apices of the peridia. The genera he arranges as follows:

Peridium without definite mouth,

- | | |
|------------------------------|-------------------------|
| Volva none | <i>Queletia</i> . |
| Volva thick, permanent | <i>Dictyocephalos</i> . |
| Volva not permanent | <i>Schizostoma</i> . |

- Peridium opening circumscissily,
 Gleba with capillitium and "annulated cells". Battarreia.
 Gleba without these characters..... Battarreopsis.
 Peridium with definite mouths,
 Peridium seated on the broad apex of the
 stipe Chlamydopus.
 Stipe inserted into a socket at base of peridium Tylostoma.

BY THE AID OF GRANTS FROM THE CARNEGIE INSTITUTION of Washington, Edgar W. Olive carried on investigations which are published in the March and April Nos. of the Botanical Gazette, 1906, under the title Cytological Studies on the Entomophthoraceae: I. The Morphology and Development of *Empusa* [A new species is described, namely *Empusa sciararum* Olive n. sp.]; II. Nucleae and Cell Divisions of *Empusa*. Plate XIV, XV and XVI.

JOHN L. SHELDON DISCUSSES THE RIPE ROT OR MUMMY DISEASE OF GUAVAS, as Bulletin 104, W. Va. Agr. Exp. Station, April 1, 1906. The disease was noticed in the greenhouses of the U. S. Department of Agriculture and a thorough study was made, also cultures and inoculations of apples and plums executed. The fungus proved to be *Gloeosporium psidii* G. Del. — a new species described by Delacroix a few months earlier. The ascigerous stage was found by Prof. Sheldon "corresponding in nearly every particular to the genus *Glomerella*." Accordingly the new name is given as follows: *Glomerella psidii* (G. Del.) Sheldon n. n.

UNDER THE TITLE OF A CULTURE MEDIUM for the Zygo-spores of *Mucor stolonifer* J. I. Hamaker, says (in Science, May 4, 1906 — N. S. Vol. 23, p. 710), that Zygo-spores may be readily secured with proper conditions of moisture and temperature, — using as a substratum corn muffin bread; the atmosphere should be saturated and the temperature about 70° F.

THE 99. LIEFERUNG (FUNGI IMPERFECTI, HYPHOMYCETES) of Rabenhorst's Kryptogamen-Flora Erster Band, VIII Abteilung, by G. Lindau, 25 July 1906, pp. 433-512, continues but does not complete the species of *Ramularia*. The following are new species: *R. dianthi* Lindau on *Dianthus carthusianorum*, *R. epilobii rosei* Lindau on *Epilobium roseum*, *R. imperatoriae* Lindau on *Imperatoria ostruthium*, and *R. tozziae* Lindau on *Tozzia alpina*.

THE GENERA *ASPERGILLUS* AND *PENICILLUM* constitute the bulk of the 94th Lieferung of Rabenhorst's Kryptogamen-Flora, VIII Abteilung, pp. 129-176, G. Lindau, 15 July 1904. Very full notes are given of some of the important species. The 33 species of *Penicillium* are divided into 4 sections according to color. As an appendix to these Dr. Lindau enumerates 23 additional species

of Dierckx obtained by cultures but not fully coordinated with the previously published forms.

THE ARTICLES IN BULLETIN DE LA SOCIÉTÉ MYCOLOGIQUE de France, Tome XXI, 2er Fascicule are as follows: M. Boudier, nouvelles espèces de Chamignons de France (Pl. 3); P. Vuillemin, *Seuratia pinicola*, sp. nov. (Pl. 4); N. Patouillard, *Rollandina*, nouveau genre de Gymnoascées (Pl. 5); N. Patouillard et P. Hariot, *Fungorum novorum Decas prima*; Maublanc, Espèces nouvelles; Maublanc, *Trichoseptoria fructigena*; F. Gueguen, Homologie et évolution du *Dictyosporium toruloides* (pl. 8 et 9); V. Harlay, Empoisonnement par l'*Amanita phalloides*, a Flize (Ardennes).

RALPH E. SMITH HAS PREPARED A BULLETIN (California Agr. Exp. Station, Bulletin No. 165, pp. 1-99, January 1905) on *Asparagus* and *Asparagus Rust* in California which "represents primarily a report to certain asparagus growers, canners and dealers of San Francisco, Sacramento, and adjoining territory, who provided a fund of \$2,500 for the support of an investigation of the *Asparagus Rust*, a disease which seriously threatened to destroy or greatly injure their industry." The main topics are: The *Asparagus Rust*; History of the Disease in California; Nature of the Rust; Cause; The Mycelium; Spore Forms; Nature of the Injury; Amount of Loss; Yearly Life-History; Relation of Natural Condition of the Rust; and the Prevention or Control of *Asparagus Rust*; Rust Parasites. Under the last topic are mentioned the *Darlucella filum* Cast., *Tubercularia persicina* Ditt., *Cladosporium* sp. — "shows no structural difference from the ordinary *Clad. herbarum* Link, a very indefinite species."

DISEASES OF THE APPLE, CHERRY, PEACH, PEAR AND PLUM, forms Bulletin No. 132, Alabama Agr. Exp. Station, April 1905, E. Mead Wilcox — popular accounts for fruit-growers.

AN EXTENDED STUDY OF THE CHEMOTROPISM OF THE FUNGI by Harry R. Fulton, in the Botanical Laboratory of the University of Missouri, is published in the Feb. No. of the Botanical Gazette, 1906.

J. C. ARTHUR GIVES AN EXTENDED REVIEW of Sydow's Monographia *Uredinearum* with notes upon the American species in the January No. of the Journal of Mycology, 1905. "One is naturally surprised to find that just twice as many endemic species are credited to America as are found in Europe. One-fourth of all the species inhabit the *Compositae* and one-eighth of them occur on the Gramineae." We give a list of those that should be made synonyms:

Puccinia cornigera E. & E. should be made a synonym of *P. actinellae* (Webb.) Syd.

Puccinia longipes Lagh. should be made a synonym of *P. vernoniae* Schw.

Puccinia aplopappi Syd. should be made a synonym of *P. tuberculans* E. & E.

Puccinia similis E. & E. should be made a synonym of *P. absinthii* DC.

Puccinia recondita D. & H. should be made a synonym of *P. conferta* D. & H.

Puccinia magnoecia E. & E. should be made a synonym of *P. asteris* Duby.

Puccinia inclusa Syd. should be made a synonym of *P. cirsii* Lasch.

Puccinia californica Diet. should be made a synonym of *P. cirsii* Lasch.

Puccinia confluens Syd. should be made a synonym of *P. erigerontis* E. & E.

Puccinia gutierreziae E. & E. should be made a synonym of *P. grindeliae* Pk.

Puccinia lagophyllae D. & H. should be made a synonym of *P. hemizoniae* E. & T.

Puccinia nardosmiae E. & E. should be made a synonym of *P. conglomerata* (Str.) K. & S.

Puccinia tracyi Sacc. & Syd. should be made a synonym of *P. solidaginis* Pk.

Puccinia philibertiae E. & E. should be made a synonym of *P. gonolobi* Rav.

Puccinia cymopteri D. & H. should be made a synonym of *P. jonesii* Pk.

Puccinia asperior E. & E. should be made a synonym of *P. jonesii* Pk.

Puccinia microica Ellis should be made a synonym of *P. cryptotaeniae* Pk.

Puccinia lindrothii Syd. should be made a synonym of *P. jonesii* Pk.

Puccinia sphaelerocondra Lindr. should be made a synonym of *P. jonesii* Pk.

Puccinia thompsonii Hume should be made a synonym of *P. sambuci* (Schw.) Arth.

Puccinia omnivora E. & E. should be made a synonym of *P. windsoriae* Schw.

Puccinia procera D. & H. should be made a synonym of *P. montanensis* Ellis.

Puccinia substerilis E. & E. should be made a synonym of *P. stipae* Arth.

Puccinia bakeriana Arth. should be made a synonym of *P. ellisii* DeT.

SOME OF THE CONTENTIONS OF EDWARD READ MEMMINGER under the title of *Agaricus amygdalinus* M. A. C. (see *Journal of Mycology*, Jan. 1905) are as follows: "As far as our research shows, *Agaricus amygdalinus* has never been technically de-

scribed, and the first appearance of the name in print was in Curtis's List of the Fungi in the Geological and Natural History Survey of North Carolina published in 1867. It is not surprising, therefore, that so little being known. . . . We think it susceptible of proof, that this plant was first published by Curtis as *Agaricus fabaceus* Berk., then this determination not proving satisfactory, it was united by Ravenel with *Ag. campestris* Linn.; dissatisfaction still existing it was finally segregated as *Agaricus amygdalinus* by Curtis. . . . From the foregoing it would seem that the geographical distribution of *Ag. amygdalinus* would be from Massachusetts to Texas. . . . Until, therefore, it is conclusively proved that *Ag. amygdalinus* and *Ag. fabaceus* are one and the same species, it is proper to confine the description to *Ag. fabaceus* strictly to the words of Berkeley, and no argument for the identity of these species, based on similarity of taste and odor, drawn from Curtis's statement in Silliman's Journal, above quoted, can have any weight or force."

THE INDEX TO NORTH AMERICAN MYCOLOGY, which is an alphabetical list of articles, authors, subjects, new species and hosts, new names and synonyms, by W. A. Kellerman appeared in instalments in 1905 in the May, July, and September No.'s of the Journal of Mycology. This comprehensive index includes everything in its scope that has appeared since the end of the year 1900. Each instalment is printed as a separate—*on one side of the page only* so that it may be cut and pasted on cards making a convenient library card index.

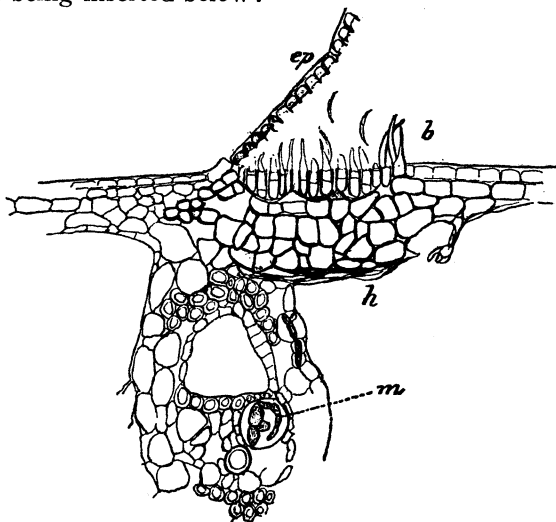
J. C. ARTHUR'S CULTURES OF UREDINEAE IN 1905, being the sixth of a series of reports by the author upon the cultures of plant rusts, gives (see Journal of Mycology, Jan. 1906) an account of 194 sowings of spores, representing 45 species of rusts, and for that purpose 100 species of hosts were utilized which were grown temporarily in pots in the greenhouse. The summary shows that 20 successful cultures were made with species previously reported, and 10 with species now reported for the first time. The latter are as follows: 1. *Puccinia silphii* Schw. — Resting teleutospores from *Silphium integrifolium* Michx. sown on same host; 2. *Puccinia grindeliae* Pk. — Resting teleutospores from *Gutierrezia sarothrae* (Pursh) B. & R. sown on same host; 3. *Puccinia solidaginis* Pk. — Resting teleutospores from *Solidago trinervata* Greene, sown on *S. Canadensis* L.; 4. *Puccinia transformans* E. & E. — Resting teleutospores from *Stenolobium Stans* (L.) Don. sown on same host; 5. *Puccinia kuhniae* Schw. — Teleutospores from *Kuhnia eupatorioides* L. sown on same host; 6. *Puccinia canaliculata* (Schw.) Lagerh. — Aecidiospores from *Xanthium canadense* Mill. sown on *Cyperus esculentis* L.; 7. *Puccinia eleocharidis* Arth. — Teleutospores from *Eleocharis palustris* (L.) R. & S. sown on *Eupa-*

torium perfoliatum L. 8. *Puccinia substerilis* E. & E. — Amphispores from *Stipa viridula* Trin. sown on the same host; 9. *Puccinia seymouriana* Arth. — Teleutospores from *Spartina cynosuroides* Willd. sown on *Cephalanthus occidentalis* L.; 10. *Uromyces acuminatus* Arth. — Teleutospores from *Spartina cynosuroides* Willd. sown on *Steironema ciliatum* (L.) Raf.

FRED. J. SEAVER DESCRIBES A NEW SPECIES OF SPHAEROSOMA [*S. echinulatum*] in the Journal of Mycology, Jan. 1905. The plant was collected on the surface of damp soil between the tufts of grass in an open place on the margin of the woods. It is illustrated by a full page plate.

A DISEASE OF BLACK OAKS CAUSED BY POLYPORUS OBTUSUS BERK. is presented by Perley Spaulding in the 16th Annual Report of the Missouri Botanical Garden, 1905. The species is American — not very generally known — and Mr. Spaulding has found it causing disease locally in Missouri and northern Arkansas. It is a true saprophyte. The rot extends up and down in the heart wood until the tree is so weakened that it breaks over or dies outright. It was found that the sporophores were growing out of the entrances of burrows made by some wood-boring insects. Three half-tone plates illustrate the species and two illustrate the insects burrows.

Through inadvertancy a cut to appear on p. 56 was omitted, the same being inserted below:



Pseudostegia nubilosa Bubák. — Radialer Schnitt: *ep*, deckelartig aufgehobene Epidermis mit den Scheiteln der dekapitierten Zellen; *b* Borsten; *h*, Hyphostroma; *m* Mycel. (240/1).